1. Job Details

Job Title: Senior Computing Officer  
School/Support Department: School of Physics  
Unit: Institute for Physics  
Line Manager: Senior Computing Manager

2. Job Purpose

Primarily focussing on the security and networking aspects of service provision this is a senior post within a team responsible for the provision of a secure, high performance network/computing infrastructure in a diverse and demanding research and teaching environment.

3. Main Responsibilities

<table>
<thead>
<tr>
<th>Approx % of time</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>15%</td>
<td>1. Network management – design and configure the Institute’s network infrastructure to ensure the provision of a robust and reliable computing service.</td>
</tr>
<tr>
<td>15%</td>
<td>2. Security – manage the integrity of the Institute’s computing environment in order to ensure a secure operational base for users, systems and data.</td>
</tr>
<tr>
<td>20%</td>
<td>3. Technical development – successfully manage and implement projects focussing on advancement in the areas of networking and security.</td>
</tr>
<tr>
<td>35%</td>
<td>4. System support – provide and maintain functional and effective computing facilities in the Institute for the purposes of teaching, research and administration.</td>
</tr>
<tr>
<td>15%</td>
<td>5. User support – provide a broad range of user support to facilitate the Institute’s main objectives in teaching and research.</td>
</tr>
</tbody>
</table>

4. Planning and Organisation

The job holder will prioritise event driven work arising within their area of responsibility - network/system fault diagnosis and remedial work will be undertaken without further consultation. They will also undertake medium to long term planning for the purposes of project/development work usually including considerable technical investigation and consultation with colleagues around the University and/or further afield.

5. Problem Solving

A high level of understanding is required to apply expert analysis and diagnostic techniques to resolve support issues primarily in the areas of networking and security. Typically the job holder will be required to perform accurate analysis in order to quickly resolve any disruption to service arising from the failure of component parts in the computing infrastructure i.e. the interaction between and the operation of desktops/servers and networking hardware. The job holder will also be required to introduce novel solutions to problems related to maintaining the integrity of the Institute's systems whilst providing inter-communication between the Institute's local area networks and external (often untrusted) networks/hosts. In some cases documented procedures are available, but the majority of work will rely heavily on the experience and expertise of the job holder.

6. Decision Making

The job holder will be expected to work without day to day supervision. In the event of a security incident, the post holder will be required to take responsibility for, and make decisions pertaining to, securing the network and preserving any and all evidence related to network traffic. Given the nature of such events it is expected that, when required to do so, the job holder will undertake these tasks without consultation.
with senior management. However, all steps taken must be made available for review by senior management.

Taking into account legislative and University policy, the post holder will be expected to make recommendations to senior management on matters of Institute/School level policy development and strategic planning. Based on expert analysis, the post holder will advise senior management on the level of risk associated with security related undertakings.

7. Key Contacts/Relationships

In addition to general day to day contact with Institute/School colleagues the job holder will work closely with the EUCS Network Services team and, when necessary, the network security team within EUCS. In the event of a security incident directly affecting the School, they will liaise with the University Incident Response Team and any other affected parties. The post holder may be called upon to provide expert advice and assistance to other University Schools. This will include both giving presentations and providing specific technical advice on security and networking.

8. Knowledge, Skills and Experience Needed for the Job

The technically challenging nature of this post requires that the job holder is educated to graduate level and has an absolute minimum of three years relevant experience in managing and running modern network infrastructures and the underlying technologies. Specialist qualifications in Network Security would be considered highly advantageous.

9. Dimensions

The job holder will have responsibility for the provision of network/computing infrastructure to the Institute and associated organisations. The Institute comprises 110 supported members of staff, and approximately 500 computers. There are a further 68 postgraduate and 426 undergraduate students. In addition to this, visiting academics and users working on collaborative projects with the School of Physics are also supported. The job holder provides technical leadership in key areas of network/computing service provision and has responsibility, in their area of expertise, for delivering projects to deadlines and producing professional documentation for use throughout the University.

The job holder may be required to undertake highly technical consultancy projects for external client organisations.

Typically, the job holder will be responsible for procuring equipment totalling in excess of £30,000 p.a.

10. Job Context and any other relevant information

The post requires extensive in-depth technical knowledge in several key areas related to the provision of a secure, robust, high performance network infrastructure. With the aim of providing the most appropriate service available the job holder must keep pace with rapidly changing industry standards and technologies. It is expected that this will be achieved through a combination of formal training and self-study. Typically there will be several competing, and often conflicting, demands placed on this area of service provision. The job holder must demonstrate excellent interpersonal skills and be comfortable dealing with a wide range of stakeholders at all levels, both internally and externally. Network security can be a controversial area, and the post holder will be required to adopt a strategic approach to maintain functionality and flexibility while creating and maintaining a secure environment. Furthermore, because of the often high profile nature of network management, security measures can be perceived to be overly restrictive and thus meet with significant resistance. Diplomacy and political awareness are key factors in resolving such issues.